

### Remarks

The non-final Office Action lists the following rejections: claims 1-3, 5, 7, 9-10 and 12 stand rejected under 35 U.S.C. § 103(a) over Huijsing (U.S. Patent No. 5,734,297); claims 4, 8, 11 and 13 stand rejected under 35 U.S.C. § 103(a) over the '297 reference in view of Miyazawa (U.S. Patent Pub. 2002/0196247); claim 11 stands rejected under 35 U.S.C. § 103(a) over the '297 reference in view of the '247 publication and Applicant Admitted Prior Art (AAPA); and claim 6 stands rejected under 35 U.S.C. § 103(a) over the '297 reference in view of Schade (U.S. Patent No. 4,392,112). In this discussion set forth below, Applicant does not acquiesce to any rejection or averment in this Office Action unless Applicant expressly indicates otherwise.

Applicant respectfully traverses the § 103(a) rejections of claims 1-13 (each of which is based on the '297 reference) because the cited art teaches away from the proposed modification and it would render the '297 reference unsatisfactory for its intended purpose. *See, e.g., KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007) and M.P.E.P. § 2143.01 ("If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification."). In *KSR*, the Supreme Court looked favorably on *Adam's* treatment of teaching away stating, "when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious."

Applying *KSR* (and M.P.E.P. § 2143.01) here, the Office Action proposes to modify the '297 reference to include a demultiplexer to selectively direct input signals  $V_{in1}$  and  $V_{in2}$  to either transistor pair M1 and M2 or to transistor pair M3 and M4. *See, e.g.,* Figures 2 and 3. However, the input stage of the '297 reference is taught to operate in an intermediate common mode in which input voltages (*i.e.*,  $V_{in1}$  and  $V_{in2}$ ) are applied to both the P-channel (*i.e.*, M3 and M4) and N-channel (*i.e.*, M1 and M2) pairs. *See, e.g.,* Col. 4:4-10 and Col. 5:21-31. Applicant submits that the addition of a demultiplexer would result in the input signals  $V_{in1}$  and  $V_{in2}$  only being able to be applied to either transistor pair M1 and M2 or to transistor pair M3 and M4, and not to both transistor pairs at the same time as is required in the intermediate common mode taught by the '297 reference. As such, the '297 reference teaches away from Office Action's proposed

modification because it would render the '297 reference unsatisfactory for its intended manner of operation. Accordingly, there is no motivation for the skilled artisan to modify the '297 reference in the manner proposed by the Office Action.

Moreover, the Office Action improperly fails to provide a valid reason why the skilled artisan would modify the '297 reference to include a demultiplexer. This approach is contrary to the requirements of § 103 and relevant law. The Supreme Court, in *KSR*, recently affirmed that a reason why the skilled artisan would combine elements must be identified:

Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

*KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007)

In this instance, the Office Action's alleged reason to combine appears to be based on the inherent function of a demultiplexer (*i.e.*, to "switch between signals"). The Office Action, however, fails to provide any reason why it would be advantageous to "switch between signals" in the input stage taught by the '297 reference. As such, Applicant submits that the Office Action has simply identified elements and appears to be improperly arranging these elements in the manner taught by Applicant's disclosure. *See, e.g.*, M.P.E.P. § 2142 ("The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.").

In view of the above, the § 103(a) rejections of claims 1-13 are improper and Applicant requests that they be withdrawn.

Notwithstanding, in an effort to facilitate prosecution, Applicant has amended claim 1 to include aspects directed to a plurality of switches that selectively direct the analog input signals to the differential input of one of the NMOS and PMOS transistor doublets and that connect the differential input of the other one of the NMOS and PMOS transistor doublets to a reference voltage. Applicant submits that the cited portions of the '297 reference do not teach or suggest such aspects. *See, e.g.*, Figures 2 and 3, and Col. 5:5-45. Thus, Applicant requests that the § 103(a) rejections of claims 1-13 be withdrawn. Applicant has also added new claims 14 and 15, which are allowable over the cited references for at least the reasons discussed above. Applicant notes that support for the claim amendments and new claims 14 and 15 can be found throughout Applicant's disclosure including, for example, in Figure 6 and the related discussion in Applicant's specification.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Aaron Waxler, of NXP Corporation at (408) 474-9063 (or the undersigned).

*Please direct all correspondence to:*

Corporate Patent Counsel  
NXP Intellectual Property & Standards  
1109 McKay Drive; Mail Stop SJ41  
San Jose, CA 95131

CUSTOMER NO. 65913

By: 

Name: Robert J. Crawford  
Reg. No.: 32,122  
651-686-6633  
(NXPS.593PA)